

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT OR THE DECLARATION

(PCT Rule 44.1)

To: JOHN P. WHITE
COOPER & DUNHAM LLP
1185 AVENUE OF THE AMERICAS
NEW YORK, NEW YORK 10036

Date of Mailing
(day/month/year)

30 SEP 1999

Applicant's or agent's file reference
56534-B-PCT

FOR FURTHER ACTION See paragraphs 1 and 4 below

International application No.
PCT/US99/11629

International filing date
(day/month/year)

26 MAY 1999

Applicant
VIROLOGIC, INC.

1. ☒ The applicant is hereby notified that the international search report has been established and is transmitted herewith.

Filing of amendments and statement under Article 19:
The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the international search report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland
Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.
2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.
3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
 - ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
 - ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.
4. **Further action(s):** The applicant is reminded of the following:

Shortly after 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in rules 90 *bis* 1 and 90 *bis* 3, respectively, before the completion of the technical preparations for international publication.

Within 19 months from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within 20 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

DIANA JOHANNSEN

Telephone No. (703) 308-0196

JOYCE BRIDGERS
PARALEGAL SPECIALIST
CHEMICAL MATRIX

Form PCT/ISA/220 (January 1994)*

Applicant: Jeannette Whitcomb
Serial No.: 09/320,299
Filed: May 26, 1999
Exhibit B

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 56534-B-PCT	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US99/11629	International filing date (day/month/year) 26 MAY 1999	(Earliest) Priority Date (day/month/year) 26 MAY 1998
Applicant VIROLOGIC, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☐ Certain claims were found unsearchable (See Box I).
2. ☐ Unity of invention is lacking (See Box II).
3. ☐ The international application contains disclosure of a nucleotide and/or amino acid sequence listing and the international search was carried out on the basis of the sequence listing
 - ☐ filed with the international application.
 - ☐ furnished by the applicant separately from the international application,
 - ☐ but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in the international application as filed.
 - ☐ transcribed by this Authority.
4. With regard to the title,
 - ☐ the text is approved as submitted by the applicant.
 - ☒ the text has been established by this Authority to read as follows:
 Title too long, PCT Rule 4.3, new title suggested follows: "MEANS AND METHODS FOR MONITORING NON-NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITOR ANTIRETROVIRAL THERAPY"
5. With regard to the abstract,
 - ☒ the text is approved as submitted by the applicant.
 - ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.
6. The figure of the drawings to be published with the abstract is:
 - Figure No. _____ ☐ as suggested by the applicant.
 - ☐ because the applicant failed to suggest a figure.
 - ☐ because this figure better characterizes the invention.
 - ☒ None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/11629

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : Please See Extra Sheet.

US CL : Please See Extra Sheet.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/5, 6, 8, 91.1, 91.2, 91.4, 91.42, 91.5, 91.51, 320.1, 455, 456, 457, 465; 536/23.1, 23.2, 23.72

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Please See Extra Sheet.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — Y	DE CLERCQ, E. Development of resistance of human immunodeficiency virus (HIV) to anti-HIV agents: how to prevent the problem. International Journal of Antimicrobial Agents. June 1997, Vol. 9, pages 21-36, especially pages 26-28.	1-5, 10-11, 28-44, 47-52 — 6-9, 12-14, 16-17, 19-22, 45-46, 54-58, 61, 65, 67-70, 72
Y	PELEMANS et al. Characteristics of the Pro225His mutation in human immunodeficiency virus type 1 (HIV-1) reverse transcriptase that appears under selective pressure of dose-escalating quinoxaline treatment of HIV-1. J. Virology. November 1997, Vol. 71, No. 11, pages 8195-8203, especially pages 8195, 8197, 8201, Table 2.	6-9, 13, 15, 18, 21

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
B earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
L document which may throw doubt on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*A* document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means	
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

25 AUGUST 1999

Date of mailing of the international search report

30 SEP 1999

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

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Authorized officer

DIANA JOHANNSEN

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CHEMICAL MATRIX

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/11629

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	BALZARINI et al. A novel mutation (F227L) arises in the reverse transcriptase of human immunodeficiency virus type 1 on dose-escalating treatment of HIV type 1-infected cell cultures with the nonnucleoside reverse transcriptase inhibitor thiocarboxanilide UC-781. AIDS Research And Human Retroviruses. 10 February 1998, Vol. 14, No. 3, pages 255-260, especially Table 1.	45-46, 57, 60, 64
Y	BALZARINI et al. Zidovudine-resistant human immunodeficiency virus type 1 strains subcultured in the presence of both lamivudine and quinoxaline HBY 097 retain marked sensitivity to HBY 097 but not to lamivudine. J. Of Infectious Diseases. November 1997, Vol. 176, pages 1392-1397, especially Table 2.	45-46, 57, 62, 66
Y	SHI et al. A recombinant retroviral system for rapid in vivo analysis of human immunodeficiency virus type I susceptibility to reverse transcriptase inhibitors. Antimicrobial Agents and Chemotherapy. December 1997, Vol. 41, No. 12, pages 2781-2785, especially pages 2781-2783.	12-22, 54-58, 60-62, 64-69, 72
Y	STRAIR et al. Recombinant retroviral systems for the analysis of drug resistant HIV. Nucleic Acids Research. 1993, Vol. 21, No. 20, pages 4836-4842, especially pages 4836-4838, 4840.	12-22, 54-58, 60-62, 64-69, 72

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/11629

A. CLASSIFICATION OF SUBJECT MATTER: IPC (6):

C12Q 1/66, 1/68, 1/70; C12P 19/34; C12N 15/00, 15/64, 15/85; C07H 21/04

A. CLASSIFICATION OF SUBJECT MATTER: US CL :

435/5, 6, 8, 91.1, 91.2, 91.4, 91.42, 91.5, 91.51, 320.1, 455, 456, 457, 465; 536/23.1, 23.2, 23.72

B. FIELDS SEARCHED

Electronic data bases consulted (Name of data base and where practicable terms used):

USPAT, WPI, CAPLUS, AIDSLINE, MEDLINE, BIOSIS, EMBASE, SCISEARCH, LIFESCI
search terms: HIV, reverse transcriptase, mutations, nevirapine, delavirdine, BHAPs, efavirenz, DMP-266